## REMARKS

PRIORITY/DECLARATION

The serial number of the predecessor application has been corrected on Pages 1 and 18 of the specification. In an office action dated February 25, 2000 (paper #12), the Examiner objected to the oath because the person making the oath in a continuation-in-part application did not acknowledge the duty to disclose between the filing date of the prior application and the continuation-in-part. In an office action dated July 18, 2000 (paper #7) the objection was maintained because the oath fails to identify priority documents.

In the Amendment dated April 2, 2002 and corrected August 26, 2002 submitted by Applicant, the phrase "continuation-in-part" was replaced by "related to". This is in accordance with the oath as originally submitted where no priority claim was made. Further, the Examiner noted in an office action dated February 25, 2000 (paper #12) at page 7 that "It has been deemed that all references to "methods of determining latent viral load" and the use of the reagents for that purpose constitutes matter not disclosed or enabled in the parent case and, as such, is not entitled to said priority date."

In light of the oath originally submitted with the instant application, the amendment made on April 2, 2002, and the Examiner's own review of the predecessor application, a supplemental oath is not necessary. Applicant respectfully requests that the objection to the oath be withdrawn.

AMENDMENT TO THE CLAIMS

Claims 2-13, 15-16 have been amended so that the article "A" has been replaced with the article "The" in the dependent claims as suggested by the Examiner in the office action dated August 16, 2001 (paper #14). In addition some minor changes were made. In particular, "HLA-DRU" was changed to "HLA-DR" in Claim 2; in Claim 5, "particle" was changed to "particles" to be consistent with other claims; a period was added to Claims 7 and 15; "claims" was changed to "claim" in Claim 13; and "specific-for" was changed to "specific for" in Claim 11. The amendments do not change the scope of the claim in any way or form, but simply clarify what was already claimed. It is respectfully requested that this objection of the Claims be removed.

REJECTION UNDER SECTION 103

In addition to the comments submitted in the corrected amendment filed August 26, 2002, Applicant respectfully requests that the Examiner consider these additional comments. The instant claims are not taught or made obvious by the combination of Chun et al. (Nature 387:183-188 May 1997), Chun et al. (Nature Medicine 1(12):1284-1290 Dec 1995) and Essex (USPN 4,725,669) for the following reasons.

In every detection system of the cited prior art, cells must by lysed for analysis. The DNA and p24 antigen assays of Chun and the SDS-PAGE analysis of Essex each require cells to by lysed before analysis and therefore the art does not teach or suggest analysis of intact cells, a claim limitation. Further, there is no suggestion or motivation in the art to analyze intact cells without a lysis step. In the prior art cited, there is no teaching or suggestion of measuring a marker on intact cells. Further a measure of DNA

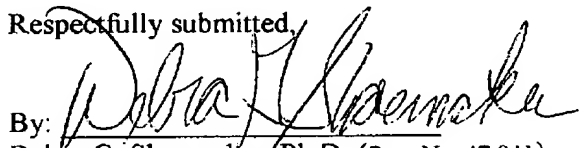
within a cell, or an intracellular antigen is different from a cell-surface antigen. Essex does not remedy the deficiencies of Chun because a teaching that a cell surface antigen exists does not make substitution of that antigen for a fundamentally different antigen or a different molecule equivalent or obvious. There is no teaching in the cited prior art that detection of p24 or HIV DNA correlates with or is equivalent to a gp120 measure.

With respect to the Fessel reference, as described in the Corrected Amendment dated August 26, 2002, the Fessel reference was not cited in this case to demonstrate "unexpected results" but rather that the skilled worker would have been uncertain whether gp120 could be used as a measure of latent viral load. MPEP 2124 states "References which do not qualify as prior art because they post-date the claimed invention may be relied upon to show the level of ordinary skill in the art at or around the time the invention was made. *Ex parte Erlich*, 22 USPQ 1463 (Bd.Pat.App.&Inter.1992)." The Fessel reference demonstrates the level of skill in the art around the time the invention was made. The Fessel reference demonstrates that a measure of nucleic acid-circulating RNA- did not encode a high number of infection viral particles. The Fessel reference supports the argument that one measure of HIV infectivity is not exchangeable with another. That is, one measure of HIV infectivity cannot be substituted for another. So that measurement of gp120 on intact cells cannot be substituted for Chun's measure of DNA as the Examiner has argued. In light of these arguments and those presented in the corrected amendment filed August 26, 2002, Applicant's respectfully request the withdrawal of the rejection of Claims 1-13, 15-16, 18-19 under 35 U.S.C. 103(a) as being unpatentable over Chun et al. (Nature 387:183-188 May 1997), Chun et al. (Nature Medicine 1(12):1284-1290 Dec 1995) and Essex (USPN 4,725,669).

Consideration and allowance of Claims 1-13, 15-16, 18-19 are respectfully requested. The Examiner is urged to contact Applicant to advance the prosecution of this application.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached paged are captioned "**Version with markings to show changes made**."

Respectfully submitted,

By: 

Debra G. Shoemaker, Ph.D. (Reg. No. 47,941)
Patent Agent for Applicants
Bio-Tech Imaging, Inc.
5711 Industry Lane Unit 31
Frederick, MD 21704
(301) 695-9900
Internet address: dshoemaker@biotechimaging.com

Date: August 26, 2002
Attorney Docket No: BIOTI7

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

**IN THE CLAIMS:**

*Please amend the claims as follow:*

2. (Twice Amended) [A]The method of claim 1, comprising, prior to said contacting, obtaining the resting lymphoid mononuclear cells by the steps of:

d) obtaining a sample cell population;

e) depleting the sample cell population of cells expressing cell-surface gp120; and

f) depleting sample cell population of cells expressing HLA-DR[U],

whereby resting lymphoid mononuclear cells are obtained.

3. (Twice Amended) [A]The method of claim 2, wherein the sample cells are depleted of gp120 expressing cells by the steps of:

d) contacting sample cells with gp120-specific antibodies, said antibodies conjugated to a capture moiety, under conditions effective for the antibodies to attach to gp120 on the surface of cells, thereby forming labeled-cells;

e) contacting the labeled-cells with capture moiety-specific antibody under conditions effective for the capture moiety-specific antibody to attach to the labeled-cells, thereby forming a complex-labeled cells; and

f) removing the complex-labeled cells, thereby depleting sample cells of gp120+ cells.

4. (Amended) [A]The method of claim 3, wherein the capture moiety-specific antibody is conjugated to magnetic particles.

5. (Twice Amended) [A]The method of claim 3, wherein the capture moiety is FITC and the capture moiety-specific antibody is FITC-specific antibody conjugated to a magnetic particles.

6. (Twice Amended) [A]The method of claim 4, wherein the magnetic particles are 10-100 nm in diameter.

7. (Twice Amended) [A]The method of claim 5, wherein the magnetic particles are 10-100 nm in diameter.

8. (Twice Amended) [A]The method of claim 3, wherein removing the complex-labeled cells is accomplished by a magnetic field acting on the magnetic particles.

9. (Twice Amended) [A]The method of claim 2, further comprising:
separating CD4+ cells from the sample prior to said contacting.

10. (Twice Amended) [A]The method of claim 2, further comprising:
separating CD8+ cells from the sample prior to said contacting.

11. (Amended) [A]The method of claim 2, wherein the depleting sample cell population of cells expressing HLA-DR is accomplished by flow cytometry cell sorting and said cells are labeled with a fluorochrome-labeled antibody specific[-]for HLA-DR.

12. (Twice Amended) [A]The method of claim 1, wherein the resting lymphoid mononuclear cells are obtained from a lymphoid tissue.

13. (Amended) [A]The method of claim[s]1, wherein the agent is phorbol ester or a cytokine.

15. (Amended) [A]The method of claim 1, wherein the measure of latent viral load is compared to an established cell line harboring latent HIV-1.

16. (Amended) [A]The method of claim 15, wherein the cell line is OM-10.1, U1, or Jurkat cells.